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A new *Trioserica* species from Ko Kut Island, Thailand (Coleoptera, Scarabaeidae, Sericinae)

Dirk AHRENS[1,3] & Phu Van PHAM[1,2,4]

[1]Museum Koenig, Leibniz Institute for the Analysis of Biodiversity Change (LIB), Adenauerallee 127, 53113 Bonn, Germany
[2]Institute of Biology, 18 Hoang Quoc Viet, Cau Giay, Hanoi, Vietnam
[3]https://orcid.org/0000-0003-3524-7153; ahrens.dirk_col@gmx.de
[4]https://orcid.org/0000-0001-9369-6649; phupham.iebr@gmail.com

Abstract: The knowledge on the taxonomy of the genus *Trioserica* Moser, 1922 is updated: *Trioserica kokut* Ahrens & Pham, **sp. nov.** is described from central Thailand. Habitus and male genitalia are illustrated for the new species. Additionally, new records of four species of *Trioserica* from Indochina are given.

Keywords: new taxon, Oriental Region, Scarabaeoidea, taxonomy

泰国阁骨岛三齿绢金龟属一新种记述（鞘翅目，金龟科，绢金龟亚科）

Dirk AHRENS[1] & Phu Van PHAM[1,2]

[1] 柯尼希博物馆，莱布尼茨生物多样性变化分析所，阿登纳大街 127 号，波恩 53113，德国
[2] 生物学研究所，18 Hoang Quoc Viet，纸桥区，河内，越南

摘要：本文更新了对于三齿绢金龟属（*Trioserica* Moser, 1922）的分类学认识：描述了一个发现于泰国中部的新种——阁骨三齿绢金龟（*Trioserica kokut* Ahrens & Pham, **sp. nov.**）。文中提供了该新种的整体图及雄外生殖器图。此外，还记录了来自中南半岛三齿绢金龟属四个物种的新分布记录。

关键词：新分类单元，东洋区，金龟总科，分类学

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Introduction

The genus *Triosericа* Moser, 1922 was revised recently in two larger works (Ahrens *et al*. 2021a, 2024) which covered the species of the entire Asian mainland (*i.e.*, China and Indochina). After completing these works the authors have studied additional new material which also revealed one new species from the Ko Kut Island, Thailand. This new species is described herein.

This work is part of an ongoing comprehensive taxonomic revision of this region, during which the principal author has published with colleagues a number of larger revisions, monographs, and catalogues (e.g., Ahrens 2000, 2003, 2004, 2005ab, 2006ab, 2007ab, Ahrens & Fabrizi 2009; Ahrens *et al.* 2014abc, 2021ab, 2022; Ahrens & Bezděk 2016, 2024; Fabrizi *et al*. 2019, 2021, Liu *et al*. 2014abc, 2015, 2016, 2019) to which also subsequent updates have been given (e.g., Liu *et al*. 2015; Ahrens 2021abc, 2022ab; Ahrens & Pham 2021).

Material and methods

The terminology and methods used for measurements, specimen dissection and genital preparation follow Ahrens (2004). Data from specimens examined are cited in the text with original label contents given in quotation marks, multiple labels for a single specimen are separated by a "/". Descriptions and illustrations of new taxa are based on the holotype specimen if not otherwise stated, while the variation of specimens is given separately under 'variation'. Male genitalia were glued to a small, pointed card and photographed in both lateral and dorsal views using a stereomicroscope Leica M125 with a Leica DC420C digital camera. A number of single focused images were combined with the Automontage software in order to obtain an entirely focused image. The resulting images were subsequently digitally edited.

Abbreviations used in the text for collection depositories are as follows:

CASG Coll. Andre Skale, Gera; Germany;

ISNB Institut Royal des Sciences naturelles de Belgique, Brussels; Belgium;

RMNH Naturalis Biodiversity Centre Leiden; Netherlands;

ZFMK Museum A. Koenig, Bonn; Germany.

Taxonomy

Triosericа kokut Ahrens & Pham, sp. nov.

https://zoobank.org/531F8A77-B168-4A2C-AEB6-67F662A1061B

Fig. 1

Type material examined. Holotype: ♂ "C-THAILAND, Trat Prov. Ko Kut Isl., 1.–11.11.2022, leg. A. Skale/ 1385 Sericini Asia spec." (ZFMK). Paratype: 1 ♀ "C-THAILAND, Trat Prov. Ko Kut Isl., 1.–11.11.2022, leg. A. Skale" (ZFMK).

Description of holotype. Length: 6.2 mm, length of elytra: 4.2 mm, width: 3.9 mm. Body oblong oval, dark brown, margins of pronotum and numerous dots on elytral lighter reddish brown, antenna and ventral surface yellowish brown, dorsal surface dull, parts of the impunctate areas of elytra shiny, pronotum iridescent; surface almost glabrous.

Labroclypeus subtrapezoidal and wide, widest at base, lateral margins convex and convergent to strongly rounded anterior angles, lateral margin and ocular canthus producing a blunt angle, margins weakly reflexed; anterior margin emarginate medially; surface weakly convex and shiny, finely and densely punctate, distance between punctures subequal their diameter, with a few long, erect setae in transverse line anteriorly. Frontoclypeal suture distinctly impressed and weakly curved; smooth area in front of eye twice as wide as long. Ocular canthus moderately long and narrow, sparsely finely punctate, with a short, fine terminal seta. Frons completely dull, with

fine and moderately dense punctures on anterior half, behind smooth, with a few short setae beside eyes. Eyes moderately large, ratio of diameter/ interocular width: 0.68. Antenna yellowish brown, composed of 10 antennomeres; club with four lamellae, weakly reflexed, three times as long as remaining antennomeres combined. Mentum convexly elevated anteriorly.

Pronotum moderately wide, widest at base, lateral margins weakly evenly convex and convergent anteriorly; anterior angles well produced and blunt; posterior angles blunt; anterior margin convex, with a distinct marginal line; basal margin without marginal line; surface with dense and fine punctures, distance between puncture subequal their diameter, midline impunctate, punctures partly with microscopic setae; anterior and lateral margins without setae. Hypomeron distinctly carinate, weakly produced ventrally. Scutellum narrow and short, with fine and dense punctures, on midline narrowly impunctate, punctures with microscopic setae.

Elytra oblong, widest at middle; striae distinctly impressed and finely and densely punctate; intervals weakly convex, densely finely punctate, impunctate areas dark and shiny, punctures reddish brown and with minute setae, otherwise glabrous, only with a few short, white setae on odd intervals; epipleural margin robust, ending at strongly curved external apical angle of elytra; epipleura sparsely setose; apical border membraneous, with a rim of short microtrichomes.

Ventral surface dull, with fine and dense punctures, sparsely and shortly setose, setae partly adpressed, otherwise with minute setae in punctures. Mesosternum between mesocoxae as wide as mesofemur, with irregularly scattered robust and long setae. Ratio of length of metepisternum/ metacoxa: 1/ 2.1. Metacoxa glabrous, laterally with numerous robust setae. Each abdominal sternite with indistinct transversal row of coarse punctures bearing each a robust seta between fine and dense punctation. Pygidium moderately convex, finely and densely punctate, without smooth midline, almost glabrous.

Legs narrow and moderately long, with shiny surface; femur with two longitudinal rows of setae, finely and moderately densely punctate. Metafemur ventrally dull, sharply carinate anteriorly, without a submarginal serrated line; posterior margin evenly convex, ventral posterior margin in distal half only weakly widened and smooth; dorsal margin smooth, with short setae. Metatibia narrow and long, widest at middle; ratio width/ length: 1/ 3.2; dorsal margin sharply carinate, with two groups of spines; basal group of spines shortly before the middle, apical one at four fifths of metatibial length; lateral face longitudinally convex, with fine and sparse punctures, glabrous; ventral margin finely serrated, with three robust, equidistant spines; medial face impunctate, apex interiorly near tarsal articulation sharply truncate. Tarsomeres dorsally glabrous and with a few fine punctures; pro- and mesotarsomeres ventrally with dense and short setae. Metatarsomeres ventrally glabrous, with a strongly serrated, longitudinal carina immediately beside it weak; metatarsomere 1 as long as following two tarsomeres combined and one quarter of its length longer than dorsal tibial spur. Protibia moderately long, tridentate, protarsal claws symmetrical, basal tooth of inner tarsal claw simply truncate at apex.

Aedeagus: Fig. 1A–C. Habitus: Fig. 1D, E.

Diagnosis. *Trioserica kokut* Ahrens & Pham **sp. nov.** differs from all other *Trioserica* species by having both basal lobes the parameres directed basally, being about half as long as the distal portion of parameres; both parameres are subequal in length, generally straight, and half as long as the phallobase.

Variation. Length: 6.2–6.4 mm, length of elytra: 4.2–4.3 mm, width: 3.9–4.0 mm. Female: Antennal club short, composed of three antennomeres, as long as remaining antennomeres combined; eyes smaller than in male, ratio of diameter/ interocular width: 0.59; pygidium weakly convex.

Etymology. The new species is named after its type locality, Kokut Island (noun in apposition).

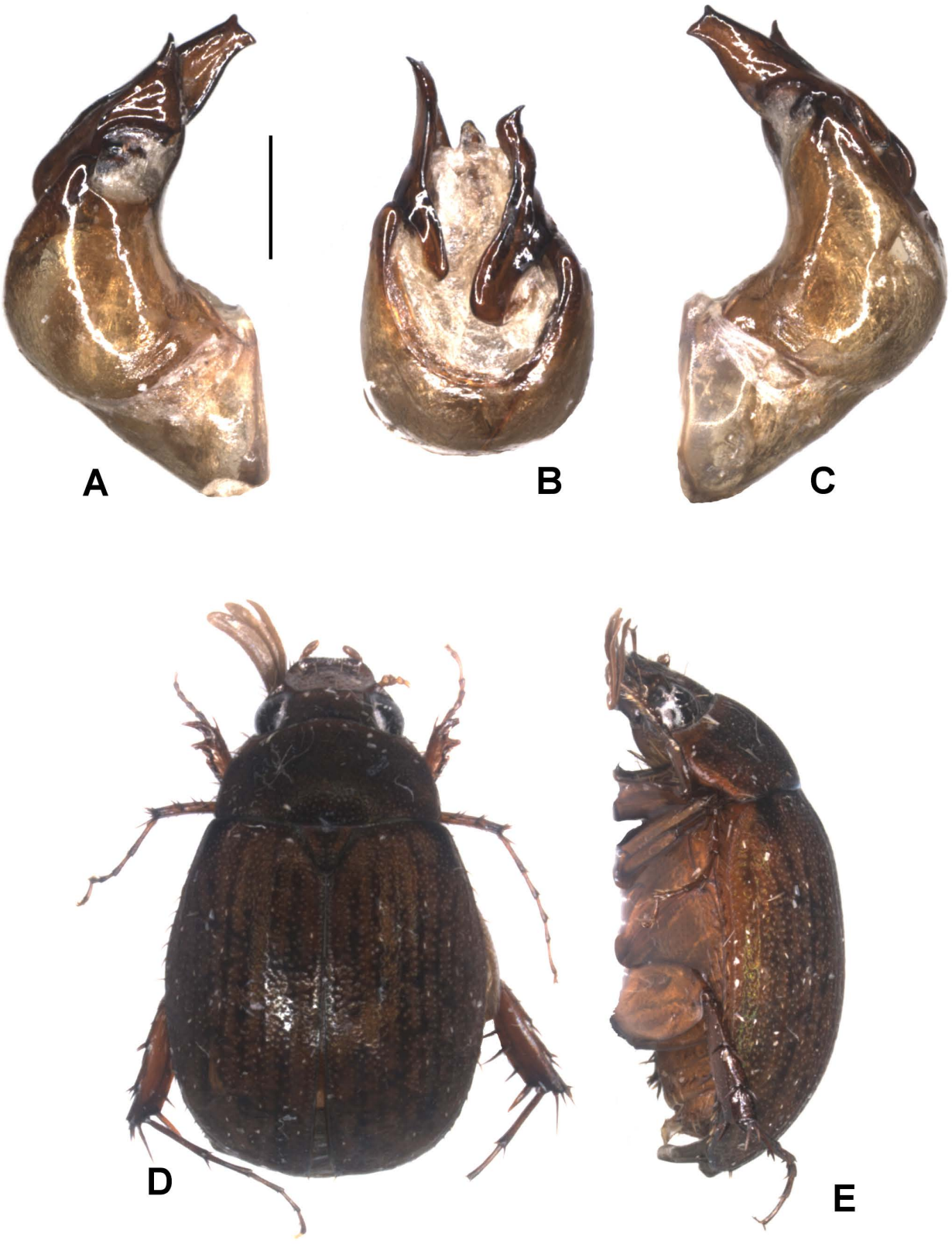

FIGURE 1. *Trioserica kokut* Ahrens & Pham, **sp. nov.** (holotype): **A** left side lateral view of aedeagus **B** dorsal view of parameres **C** right side lateral view of aedeagus **D** dorsal view of habitus **E** lateral view of habitus. **A-C** scale: 0.5 mm **D, E** not to scale.

New records

Trioserica hartmanni Ahrens, Lukic & Pham, 2024

Material examined. 3 ♂♂, 2 ♀♀ "C-Vietnam, Thừa Thiên Huế Prov., Phú Lôc, Bach Mã NP, 16°11'39"N, 107°51'12"E, 1250-1400m, 05.-09.V.2019 A. Skale" (ZFMK, CASG).

Remarks. This is further record of the species from the type locality.

Trioserica phnomkulen Ahrens, Lukic & Pham, 2024

Material examined. 1 ♂ "Coll. I.R. Sc. I. N. B. CAMBODIA Phnom Kulen 24.V.2003 Light trap Leg. J. Constant & K. Smets" (ISNB), 1 ♂ "Museum Leiden Viet Nam (Dong Nai Prov.) Cát Tiên N.P.: Dong trail; near guesthouse. 14-v-2007. Leg. E. Gassó Miracle & Nguyen Than Mahn/ humic lowland forest; light trap (ML), 18-20 hrs. 11°26'20.6"N 107°25'42"E" (RMNH).

Remarks. This is further record of the species from the type locality.

Trioserica dongnai Ahrens, Lukic & Pham, 2024

Material examined. 1 ♂, 2 ♀♀ "S-Vietnam, Bin Phuoc Pr, Bu Gia Map NP, 16.-20.4 2024, 12°11'38"N, 107°12' 21"E, 450-600 m, A. Skale" (CASG).

Remarks. This is further record of the species in vicinity its type locality in southern Vietnam.

Trioserica dalat Ahrens, Lukic & Pham, 2024

Material examined. 1 ♂ "S-Vietnam, Lam Dong Pr Lac Duong Distr., Bidoup Nui Ba NP, 1450-1650m, 22.-28.4.2024 leg. A. Skale" (ZFMK).

Remarks. This is further record of the species in vicinity its type locality in southern Vietnam.

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